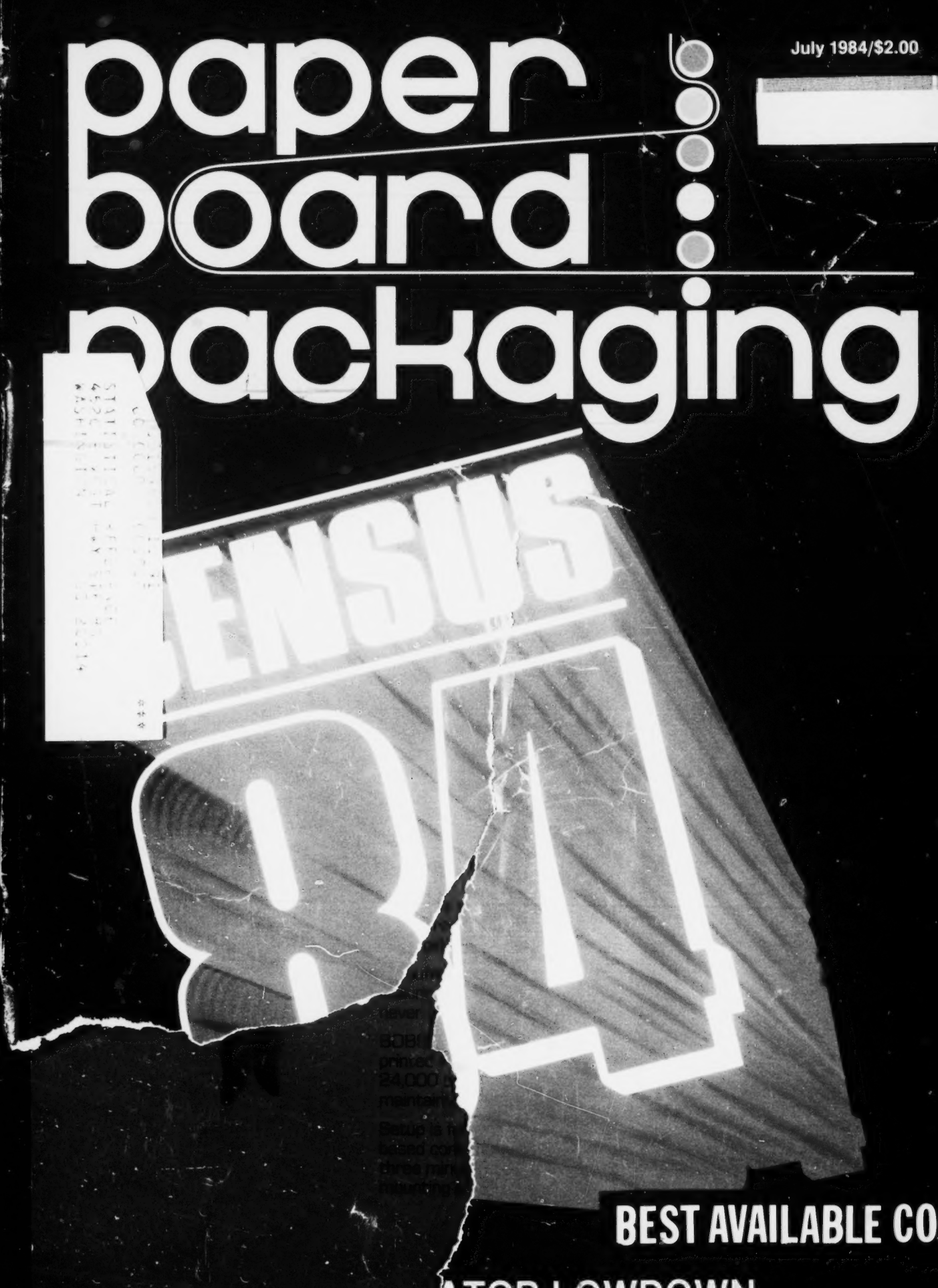
paperboard packaging

July 1984/$2.00



BEST AVAILABLE CO

paper board packaging

JULY 1984, VOLUME 69, NO. 7

On the Cover:

Our first fullscale statistical report on buying, Census '84 gives a thorough look at purchasing of major equipment and materials in the corrugated and folding-carton converting industries.

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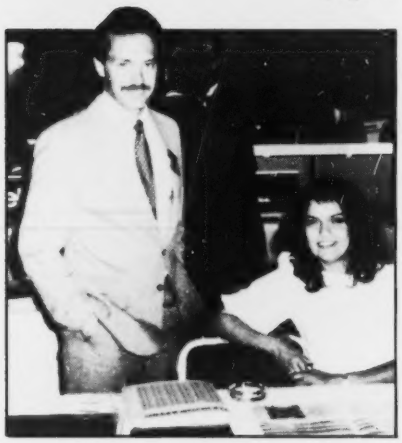

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CENSUS 84

20 Census '84 Shows Buying Is Brisk
An in-depth research study of board converting operations in North America indicates that management is opening its wallet and shelling out more for machinery and materials.

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by Mark Arzoumanian
Manufacturers and converters examine this key piece of machinery and discuss new developments, present weaknesses and possible future scenarios.

MATERIALS HANDLING

34 Baling and Shredding Keeps Plants Clean
Paper recycling systems take scrap from diecutters, flexo folder-gluers and other converting equipment and squeeze it into compact bales for resale or disposal.

STATE OF THE INDUSTRY

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by Roger W. Stone
The future looks promising, so get out in front of change, don't be swept up by it, says a top executive with one of the most successful corrugated converting enterprises in the U.S.

MEETINGS & CONVENTIONS

46 FTA Forum Draws Record Attendance
With speakers and discussions on the latest technology in a blossoming field, the FTA Forum in New Orleans was geared toward four distinct areas of flexo application.

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49 **U.S. Diemaker Challenges European-Based Pioneers**

by Robert Gitlin

Scoredraw II, a laser-diecutting software program from Precision Rule Die Inc., Wadsworth, Ohio, offers the advantage of multi-user capability.

MATERIALS HANDLING

54 **Pallet Changeover Protects Merchandise**

by Robert Gitlin

Since switching to plastic, the Racine, Wisc., plant of Great Northern Corp. has stopped losing pallets and stopped damaging its stacks of corrugated board.

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September: Statistics Issue/AICC 10th Anniversary/IPEX

October: Corrugated Containers Report/Computers/TAPPI

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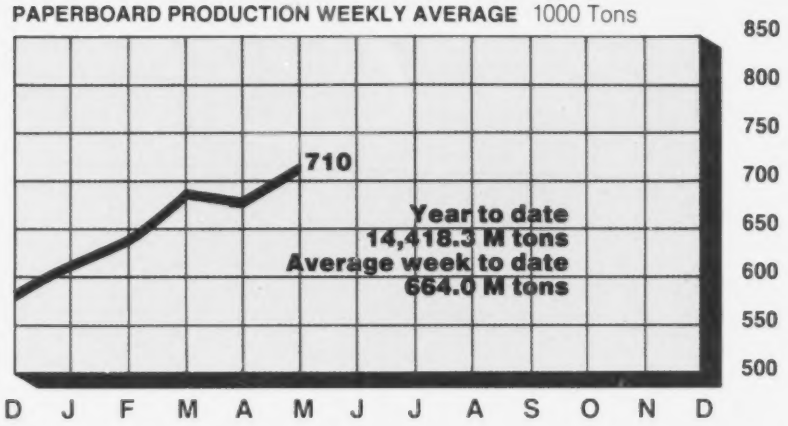
INDUSTRY
STATISTICS FOR 1984

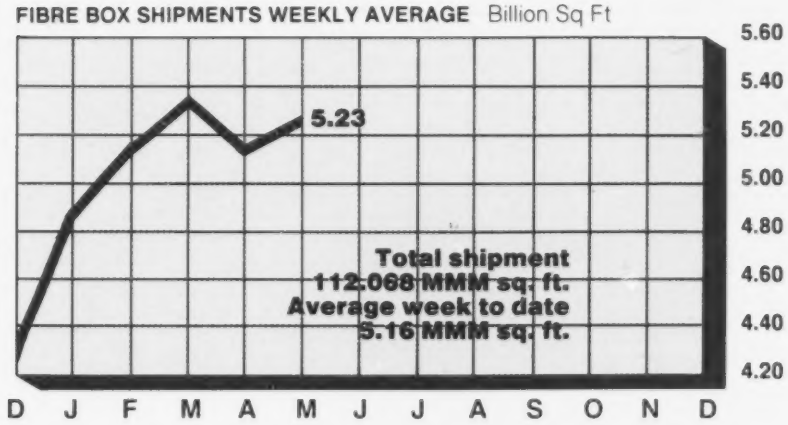
PAPERBOARD PRODUCTION WEEKLY AVERAGE 1000 Tons



PAPERBOARD MILL OPERATIONS

The 1984 average week saw 664,000 tons produced as of May-end. This is an increase of 11.5% from that time in 1983, which was 2.9% up from '82, which had been down by 8.5% from 1981. Further, demand is sustained and strong. At end of the first five months, tonnage of unbleached sulfate furnish is still 10.8% ahead of last year, with a rise of 11.1% for semichemical, of 8.7% for bleached sulfate, and of 15.8% for recycled furnishes, with prices firm and improving, for pulps and paper stocks alike.

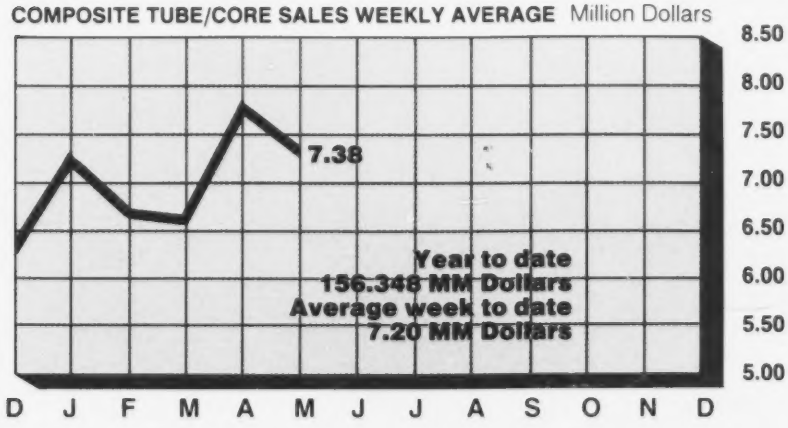
FIBRE BOX SHIPMENTS WEEKLY AVERAGE Billion Sq Ft



PAPERBOARD-TYPE PRODUCTION

May produced 3142.0M tons of paperboard, up 19.5% from the '83 month, which had been 2.8% up from '82, which had been 9.5% down from 1981. Some 2325.8M tons of containerboards were 16.8% up from '83, which had been up 3.2% from '82, which was 10.3% down from '81. The rise was 15.4% fox boxboard grades, at 816.2M short tons. The containerboard/boxboard tonnage ratio in May was thus 2.8-to-1 of earlier years, and appearing to presage a continuing decline of the boxboard packaging expansion.

COMPOSITE TUBE/CORE SALES WEEKLY AVERAGE Million Dollars



RIGID PAPER BOXES

While greatly recovered from doldrums of earlier recession, set-up boxes continue to evince the industry's most volatile packaging performance. Of the National Paperbox & Packaging Association's eight major geographical regions, all have experienced at least one month of billings down from last year, yet all have also had at least one month of double-digit "plus" business. This year, the traditional "see-saw" effect appears to be striking chiefly in the East; next year, expectably, the trend will be reversed again. In any case, the billings rise is in unit price increase; tonnage is still dropping.

paper board packaging CENSUS '84

An in-depth research study of board converting operations in North America indicates that management is opening its wallet and shelling out more for machinery and materials.

Census '84 Shows Buying Is Brisk

This is *Paperboard Packaging*'s first Census report. Census '84 is a definitive, in-depth statistical analysis of purchasing of both major equipment and materials in both the corrugated and folding-carton converting industries.

It was conducted, accordingly, in two distinct parts—a survey of corrugated converting operations and a survey of folding-carton converting operations—by Infometrics, the research arm of HBJ Publications Inc. (headquartered in Duluth, Minn.).

A random sampling was taken of top management at United States and Canadian paperboard converting operations listed in the *Official Container Directory*. The percentages that emerged were extrapolated to scientifically valid and reliable estimates of total plant figures.

We're proud to report that the margin of error was as low as ±2% with some questions and never higher than ±9% with others.

We've distilled the major statistics into readable tables, bar graphs and pie charts.

Further analysis of Census '84 will appear in the next two issues of *Paperboard Packaging*—August concentrating on major-equipment purchasing and September on materials purchasing.

Corrugated

As you can see, we've tabulated our data according to corrugated converting plants *and* combiner plants. Naturally, the 644 combiner plants, which have corrugators, are also among the 1415 corrugated converting plants in the first table.

The most frequent major-equipment purchases for combiner plants are cutoff knives (15.2%), followed by corrugated stackers (8.1%) and fingerless single facers and downstackers (both 6.1%).

The full Census '84 occupies two rather substantial and sturdily bound volumes, which include information on which brands are best known by respondents. The individual reports on corrugated or folding carton findings are available for $55. The entire two-part study costs $85. Interested readers are directed to call Paperboard Packaging Publisher Richard Perkins at (312) 938-2351 or write him at 111 E. Wacker Dr., 17th Floor, Chicago, IL 60601.

The first table shows what are urgent needs and what are more back-burner considerations in the heads of top management at North American corrugated converting plants, when they take a hard look at the requirements of their facilities. This table on purchasing intentions indicates that conveyors are the object of more purchasing plans (30.3%) than are any other type of major corrugated-converting plant equipment. Following, in order, are anilox rolls (23.5%), strappers (22.2%), brakes and clutches (19.2%), flexo folder-gluers and core chucks and shafts (each 18.2%), rotary diecutters and chrome rolls (each 15.2%), and baling and scrap handling equipment, flexographic printing presses, and gluing equipment (each 13.1%).

The bar graphs indicate a definite growth in materials purchasing. Plant executives throughout North America responded they would spend more in the next 12 months on adhesives, coatings, printing plates, printing ink, cutting dies and film masters than they had in the prior 12 months. The highest forecast for the upcoming year is a $148 million industrywide expenditure for printing inks, followed by $108 million for adhesives and $92 million for printing plates.

The pie chart for adhesive types shows resins are the most prevalent in corrugated box plants today (48.54%). The pie chart for cutting dies shows most are rotary (58%), the rest flatbed (quite a difference from the folding carton field.)

Folding carton

The table on major equipment purchases in folding carton converting plants shows that lithographic and offset presses are the most frequent subject of purchasing considerations (36.2%). Close behind are gluing equipment (28%), cutters and creasers (21.0%) and coaters (20.0%).

Just as in the case of corrugated converting plants, there is definite growth in materials purchasing for the folding carton industry. Management of folding carton plants are increasing spending over the next 12 months for adhesives, coatings, printing plates, inks, cutting dies and film masters. The folding carton industry responded it would spend more money on inks ($171 million) than on anything else in the 12 months ahead. Next were cutting dies ($68 million) and printing plates ($58 million).

As with corrugated, resins prove the predominant adhesive used (49.39%), though we have a little more competition here—from latex (20.09%)—than we had in the chart from the corrugated field. The pie chart on cutting dies shows a major difference from corrugated: in folding carton plants, 94% of cutting dies used are flatbed.

Corrugated converting plants

Corrugated converting plants planning to purchase one or more units in the next 12 months

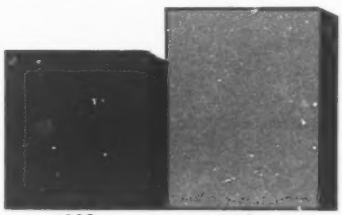
1415 total in U.S. and Canada

MAJOR EQUIPMENT	TOTAL PLANTS	PERCENT
Baling & scrap handling equipment	185	13.1
Flexographic presses	185	13.1
Letterpresses	28	2.0
Litho/offset printing presses	85	6.0
Brakes & clutches	272	19.2
Core chucks & shafts	258	18.2
Rotary diecutters	215	15.2
Flat bed diecutters	143	10.1
Drying equipment	42	3.0
Feeders	143	10.1
Flexo folder-gluers	258	18.2
Folder-gluers	100	7.1
Laminating machines	115	8.1
Conveyors	429	20.3
Splicers	171	12.1
Roll stands	57	4.0
Rollers	100	7.1
Chrome rolls	215	15.2
Anilox rolls	333	23.5
Ceramic rolls	188	13.3
Slitters	28	2.0
Stitchers	86	6.1
Strappers	314	22.2
Strippers	28	2.0
Gluing Equipment	185	13.1

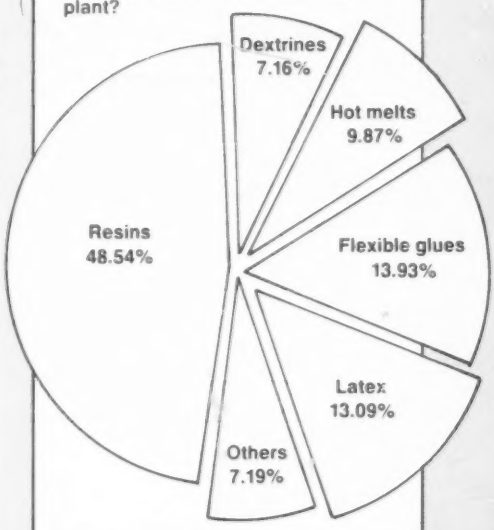
MATERIALS - ALL PLANTS

What was your total expenditure for adhesives in past 12 months?
Average per plant - $61,688
Total - $87,288,986

What will your total expenditure for adhesives be in next 12 months?
Average per plant - $76,295
Total - $107,957,425



What percentage of the following adhesive types do you use in your plant?



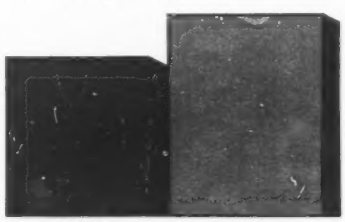
Combiner plants planning to purchase one or more units in the next 12 months

(644 total in U.S. and Canada)

MAJOR EQUIPMENT	TOTAL PLANTS	PERCENT
Corrugators	13	2.0
Corrugated stackers	52	8.1
Downstackers	39	6.1
Counter stackers	26	4.1
Cutoff knives	98	15.2
Fingerless single facers	39	6.1
Coaters	6	1.0

What was your total expenditure for coatings in the past 12 months?
Average per plant - $47,846
Total - $67,700,675

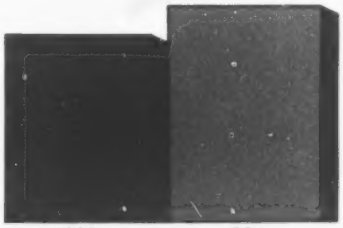
What will your total expenditure for coatings be in the next 12 months?
Average per plant - $57,091
Total - $80,783,765



CENSUS 84

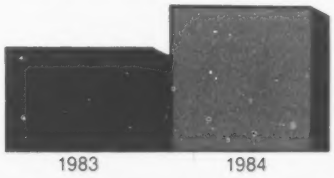
What was your total expenditure for printing plates in the past 12 months?
Average per plant - $55,364
Total - $78,339,649

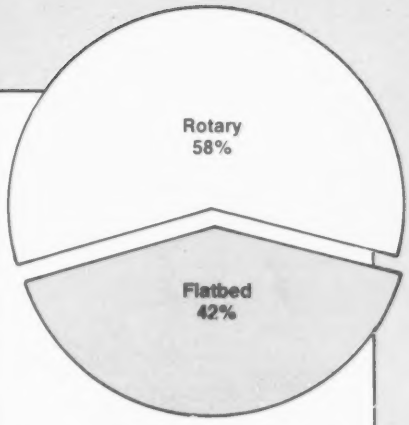
What will your total expenditure for printing plates be in the next 12 months?
Average per plant - $64,674
Total - $91,513,710



What was your total expenditure for film masters (UPC Bar Codes) in the past 12 months?
Average per plant - $2,194
Total - $3,104,510

What will your expenditure for film masters (UPC Bar Codes) be in the next 12 months?
Average per plant - $3,125
Total - $4,421,875





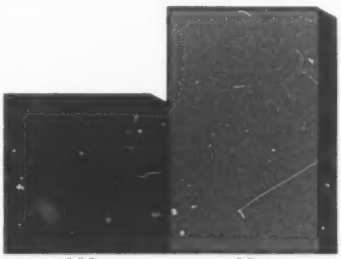
What percentage of your cutting dies are rotary? 58%

What percentage of your cutting dies are flatbed? 42%

Folding carton plants

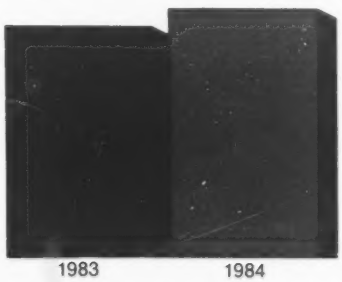
What was your total expenditure for printing ink in the past 12 months?
Average per plant - $70,546
Total - $99,822,788

What will your total expenditure for printing inks be in the next 12 months?
Average per plant - $104,857
Total - $148,372,655



What was your total expenditure for cutting dies in the past 12 months?
Average per plant - $36,445
Total - $51,571,090

What will your total expenditure for cutting dies be in the next 12 months?
Average per plant - $37,542
Total - $53,121,930



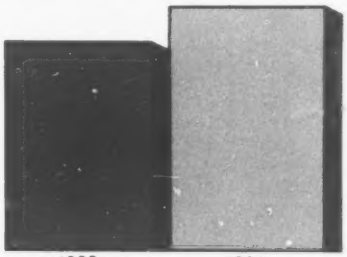
Folding carton plants planning to purchase one or more units in the next 12 months
(679 total in U.S. and Canada)

MAJOR EQUIPMENT	TOTAL PLANTS	PERCENT
Coaters	136	20
Gluing equipment	190	28
Flexographic presses	20	3
Gravure presses	14	2
Litho/offset presses	245	36.2
Brakes & clutches	81	12
Core chucks & shafts	54	8
Cutters & creasers	143	21
Rotary diecutters	35	5.1
Flat Bed diecutters	41	6
Drying equipment	81	12
Feeders	20	3
Flexo folder gluers	14	2
Folder gluers	41	6
Foil stamping equipment	7	1
Laminating machines	7	1
Embossing rolls	20	3
Chrome rolls	34	5
Anilox rolls	41	6
Ceramic rolls	14	2
Sheeters	27	4

CENSUS 84

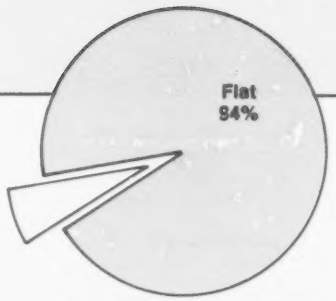
What was your total expenditure for coatings in the past 12 months?
Average per plant - $61,306
Total - $41,626,774

What will your total expenditure for coatings be in the next 12 months?
Average per plant - $71,244
Total - $48,374,676



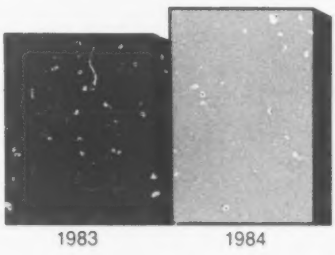
What percentage of your cutting dies are rotary - 6%

What percentage of your cutting dies are flat - 94%

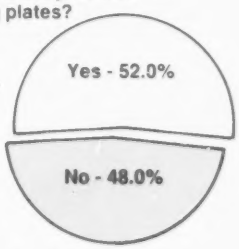


What was your total expenditure for cutting dies in the past 12 months?
Average per plant - $92,983
Total - $63,135,457

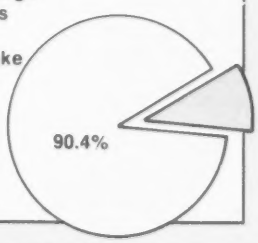
What will your total expenditure for cutting dies be in the next 12 months?
Average per plant - $100,318
Total - $68,115,922



Do you make your own printing plates?

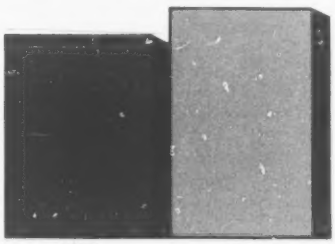


If yes, what percentage of your plates does your company make itself?



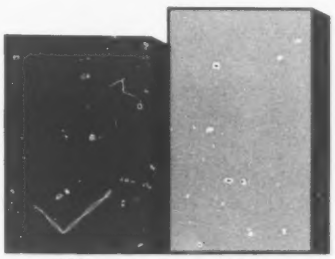
What was your total expenditure for printing plates in the past 12 months?
Average per plant - $78,494
Total - $53,297,426

What will your total expenditure for printing plates be in the next 12 months?
Average per plant - $85,146
Total - $57,814,134



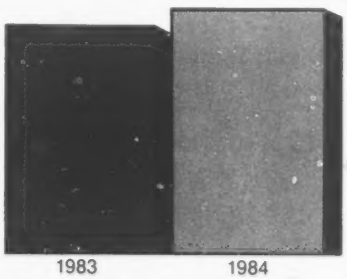
What was your total expenditure for inks in the past 12 months?
Average per plant -$232,665
Total - $157,972,745

What will your total expenditure for inks be in the next 12 months?
Average per plant - $252,176
Total - $171,227,504

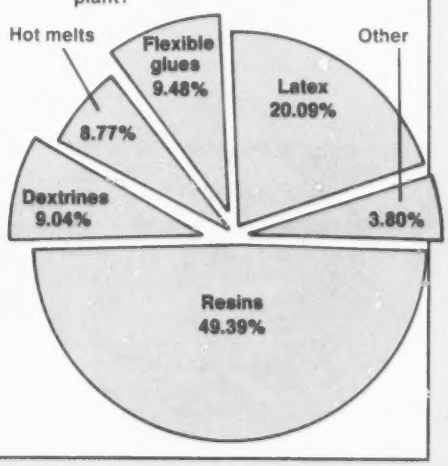


What was your total expenditure for adhesives in the past 12 months?
Average per plant - $68,375
Total - $46,426,625

What will your total expenditure be for adhesives in the next 12 months?
Average per plant - $71,949
Total - $54,285,371



What percentage of the following adhesive types do you use in your plant?



What was your total expenditure for film masters in the past 12 months?
Average per plant - $7,461
Total - $5,066,019

What will your total expenditure for film masters be in the next 12 months?
Average per plant - $8,036
Total - $5,456,444